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PROCEEDINGS
OF
THE ROYAL SOCIETY.

1840.

No. 45.

November 19, 1840.

The MARQUIS of NORTHAMPTON, President, in the Chair.

Edward Kater, Esq., was balloted for, and duly elected a Fellow of the Society.

A paper was read, entitled, Supplement to a paper "On the Theoretical Explanation of an apparent new Polarity in Light;" by George B. Airy, Esq., M.A., F.R.S., Astronomer Royal.

In a paper published in the second part of the Philosophical Transactions for 1840, the author explained, on the undulatory theory of light, the phenomena observed by Sir David Brewster, and apparently indicating a new polarity in light. That explanation was founded on the assumption that the spectrum was viewed out of focus; an assumption which corresponded with the observation of the author and of other persons. But the author having, since the publication of that memoir, been assured by Sir David Brewster that the phenomenon was most certainly observed with great distinctness when the spectrum was viewed so accurately in focus that many of Fraunhofer's finer lines could be seen, he has continued the theoretical investigation for that case, which had been omitted in the former memoir, namely, when the spectrum is viewed in focus; and he has arrived at a result, which appears completely to reconcile the seemingly conflicting statements, and to dispel the obscurity in which the subject had hitherto been enveloped.

November 26, 1840.

Sir JOHN BARROW, Bart., Vice-President, in the Chair.

The following gentlemen were, by ballot, elected Auditors of the Treasurer's Accounts, on the part of the Society, viz. William Thomas Brande, Esq.; Richard Bright, M.D.; William Henry Fitton, M.D.; Lieut.-Colonel William Henry Sykes; and the Rev. Robert Willis, M.A.

Charles Dickson Archibald, Esq., and William Robert Grove, Esq., were balloted for, and duly elected Fellows of the Society.

The following papers were read :—

1.—Description of a Percussion Shell to explode at the bottom of the Sea. By Captain J. Norton. Communicated by S. Hunter Christie, Esq., M.A., Sec. R.S., &c.

An iron tube, like the barrel of a musket, is screwed into a shell of any size, water-tight. A rod of iron, about half a pound in weight and a foot in length, is suspended within the tube, by means of a split quill passing through a hole in the upper end of the rod, the other end being armed with a percussion-cap. The mouth of the tube is closed with a screw lid also water-tight. Tin or brass wings being attached to the upper end of the tube will keep it in a vertical position during its descent to the bottom of the sea; and the shock on its striking the bottom will cause the bar of iron within the tube to fall, and produce the percussion and explosion.

Should it be found difficult to make the shell water-proof, I am satisfied that percussion powder made from silver will explode by friction or percussion even when *mixed with water*.

2.—Memorandum addressed to the Royal Society. By T. Whar-ton Jones, F.R.S.

The following is the memorandum in the words of the author :—

On the 18th of June, 1835, a memoir, entitled, “On the Ova of Man and Mammiferous Animals, as they exist in the Ovaries before Impregnation, and on the discovery in them of a Vesicle analogous to that described by Professor Purkinje in the Immature Egg of the Bird,” was laid before the Royal Society.

At the time I wrote, I believed myself the first who had observed the vesicle alluded to; but by a reference to the manuscript in the archives of the Society, it will be seen, from a postscript, that before sending it to be communicated, I had become aware that M. Coste of Paris had some time before announced that he had made a similar observation, as far as concerns the rabbit. Those who are conversant in such matters are doubtless aware that I was anticipated also by Professor Valentin; but of this circumstance I was not informed till some considerable time after.

It thus appears that, though I was an independent discoverer of the germinal vesicle of the mammiferous ovum, all the share in the discovery I can lay claim to *historically* is that of being the first who pointed it out in this country.

There is one point, however, in the anatomy of the germinal vesicle of the mammiferous ovum of which I feel myself entitled to be recognized, especially by the Royal Society, as contemporaneous discoverer, and that is, the spot on the side of the vesicle. Feeling this, and having heard at the last meeting of the Royal Society the discovery of this spot attributed solely to the distinguished German